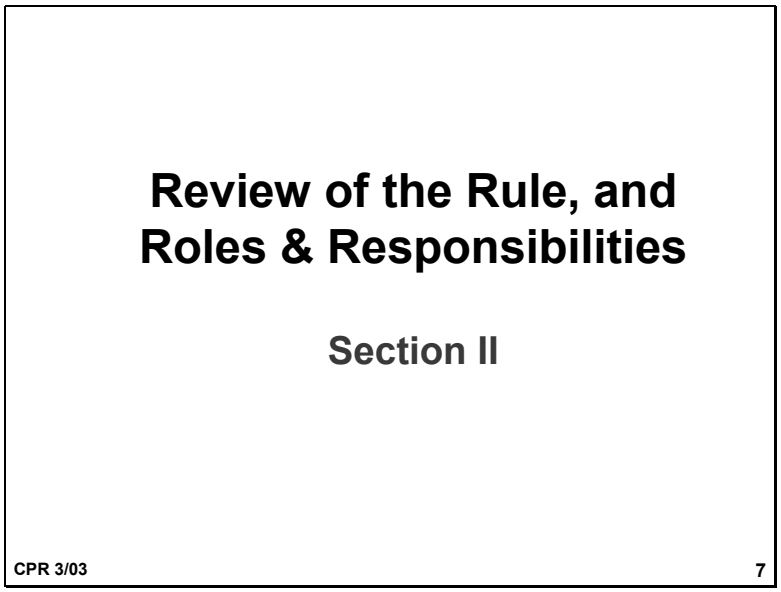
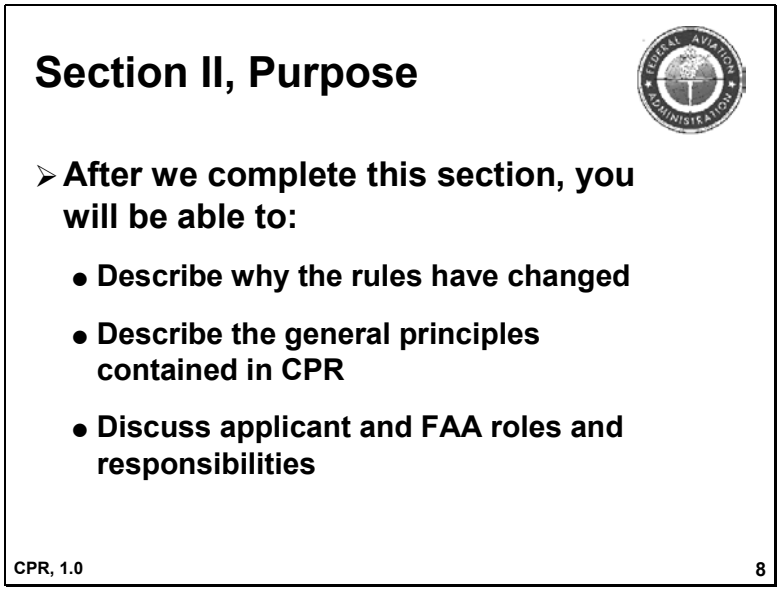
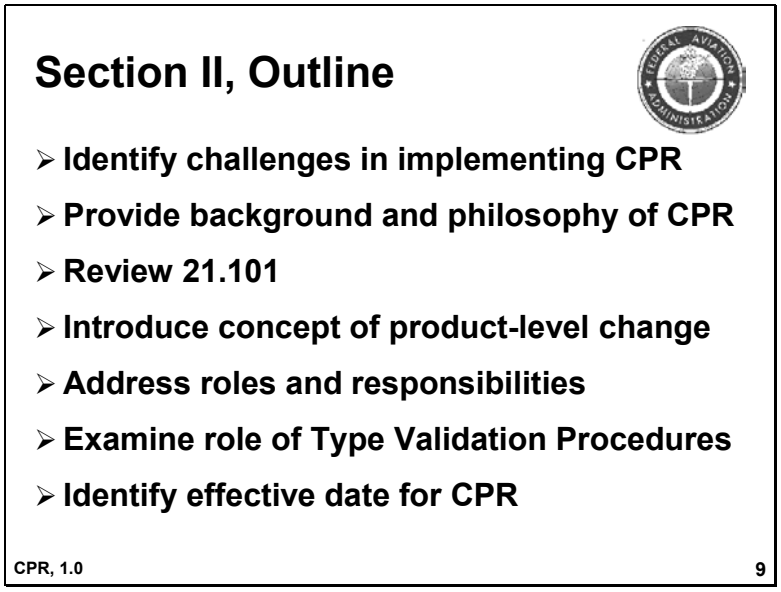
II. REVIEW OF THE RULE, AND ROLES AND RESPONSIBILITIES



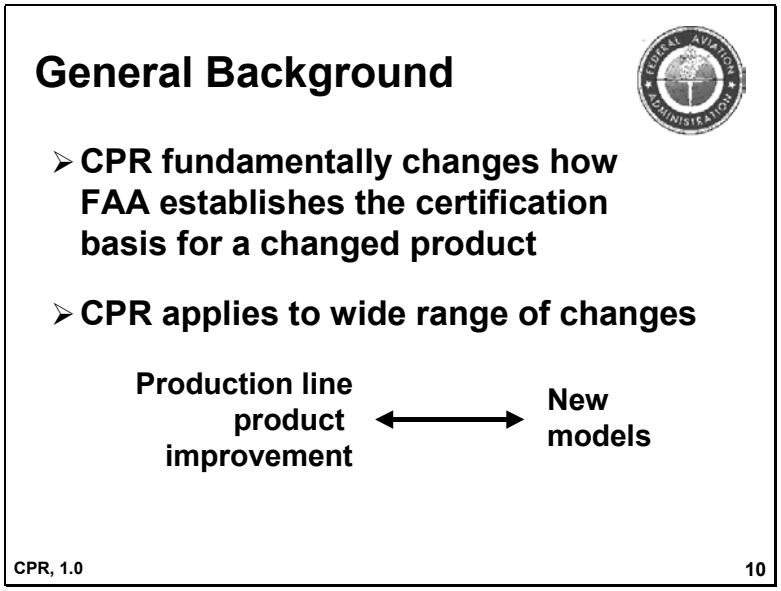
A. Overview

- This course is new material and may differ in significant ways from what you've seen in the past.





B. Challenges in Implementing CPR



General Background, cont.

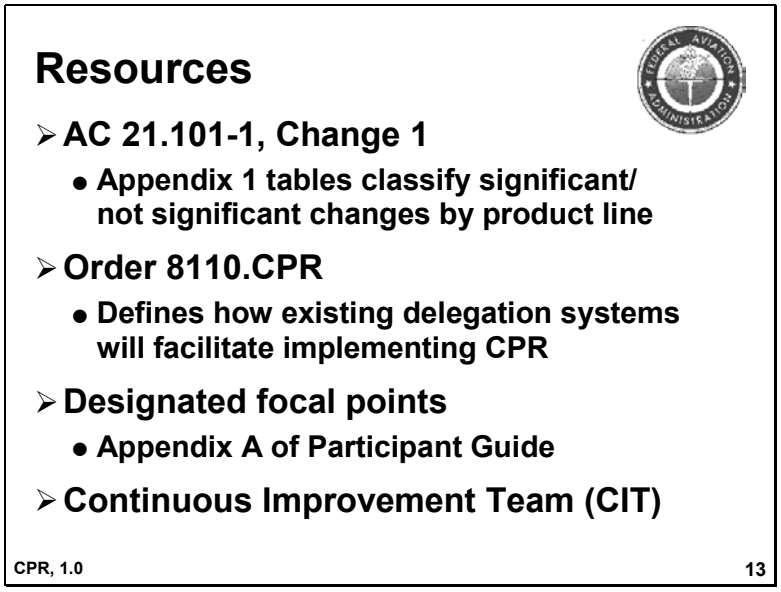
- **However . . .**
  - **Impact of CPR limited in terms of number of changes affected**
  - **Existing certification basis will continue to be appropriate in most cases**

CPR, 1.0 11

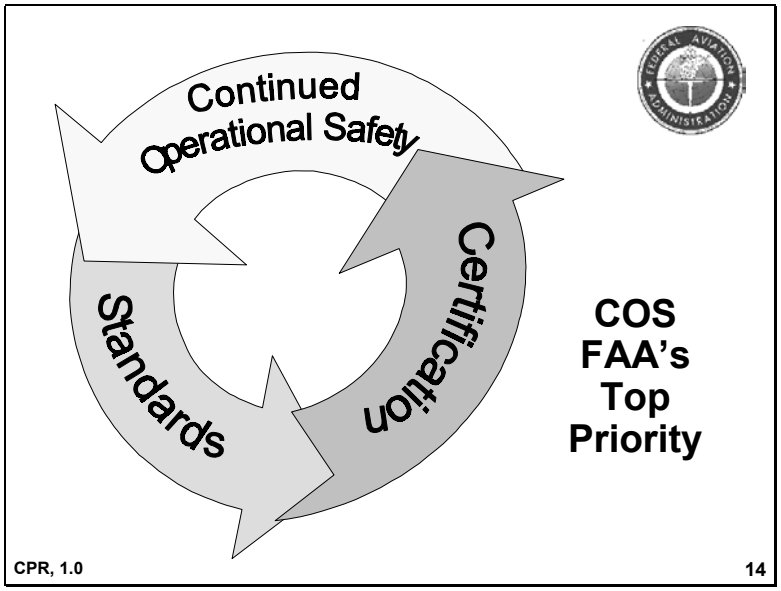
Challenges

- **Apply equitably across all applicants and methods of approval**
- **Meet intent of rule without creating unnecessary burden for negligible safety benefit**
- **Keep focus on significant changes without undue burden on FAA and industry**
- **Strive to implement CPR internationally in accordance with agreed-upon principles**

CPR, 1.0 12



C. Introduction of the Revised CPR

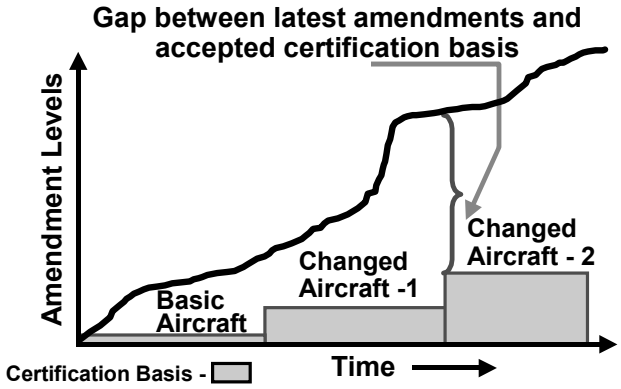


Objective Risk Management

- **Focus safety work that provides greatest safety benefit**
- **CPR allows FAA employees to focus certification time on critical few changes while lower-level changes done in more streamlined fashion**
- **Frees up critical resources to focus on COS**

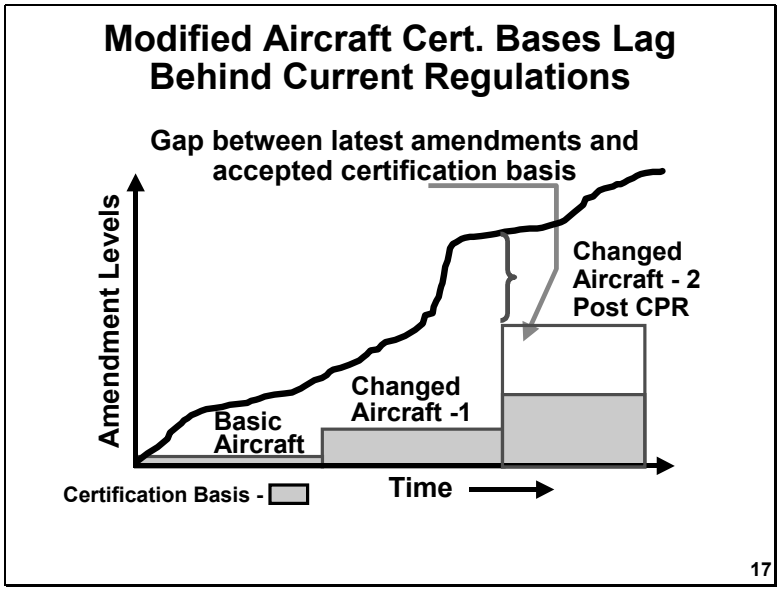
CPR, 1.0 15

Modified Aircraft Cert. Bases Lag Behind Current Regulations



16

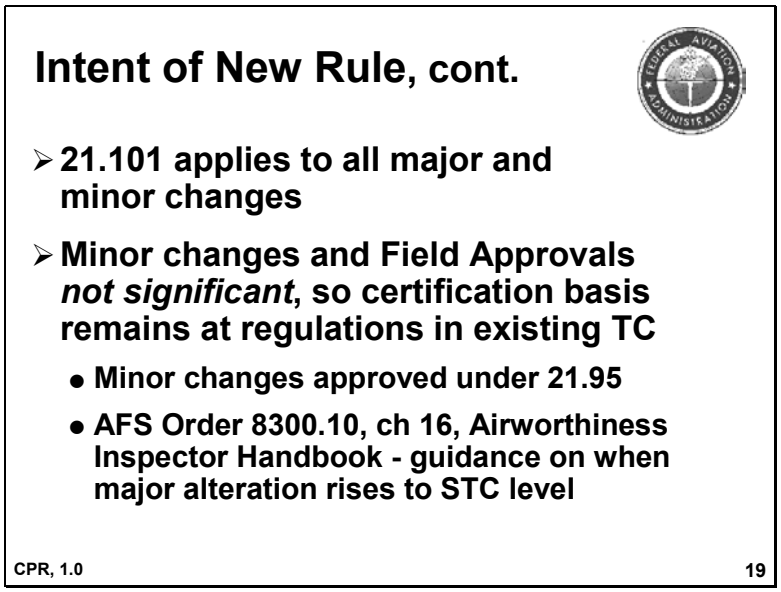
- This slide is notional and not meant to represent a specific aircraft example.
- Most new regulations address new hazards and, therefore, increase safety.



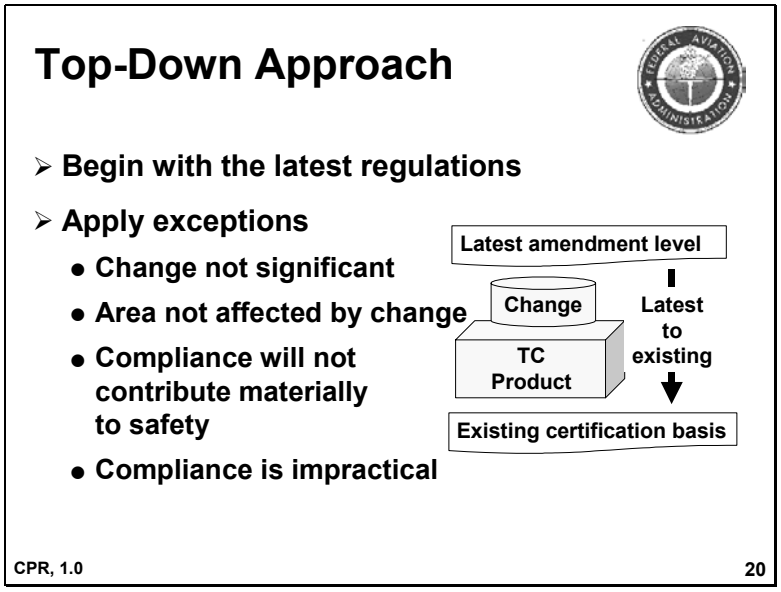
- The objective of the new rule is to reduce the gap between the product's certification basis and the current regulations.

- We will introduce new concepts that will help you determine whether or not a change is ***significant***. The primary concept we will be discussing is that of ***product level***.
- We are talking specifically about products redesigned as essentially "new products" through a series of changes that

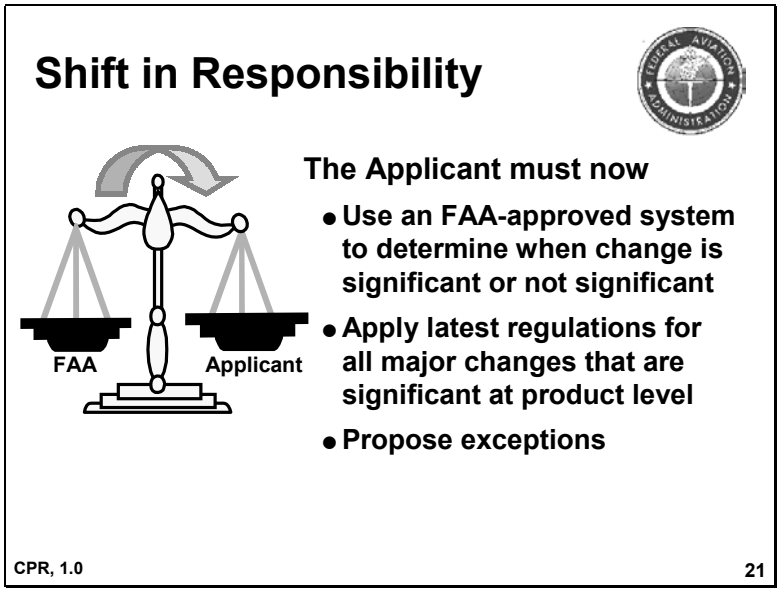
will have a 20+ year life span. These redesigned products should incorporate the latest regulations so as to achieve a level of safety comparable to that of newly-designed products.



- With the exception of one important group of excepted aircraft, the changed product rule establishes the certification basis beginning with the application of the latest regulations for **SIGNIFICANT** changes to the overall product. We refer to this as a "top-down" approach. We will **discuss the excepted products in detail later** in this presentation.

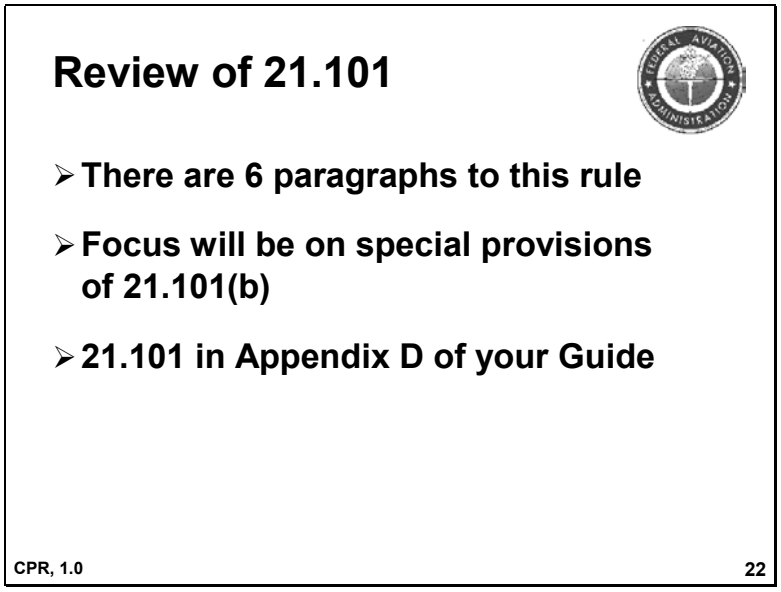


- The latest regulations are applied to all the areas affected by the ***significant*** change.

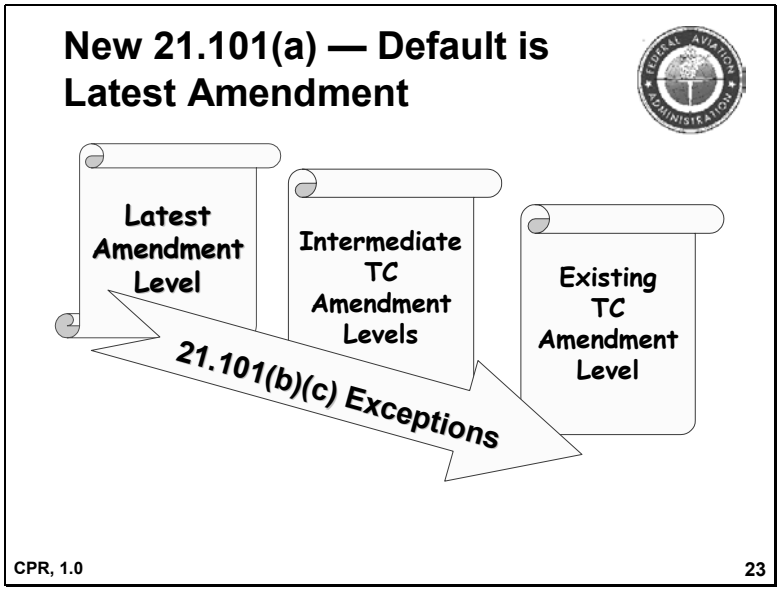


- In general, the **burden of justifying** a change in certification basis **has shifted from the FAA to the applicant**, unless the **applicant** can demonstrate that certain exceptions exist. The exceptions permit the application of earlier requirements.

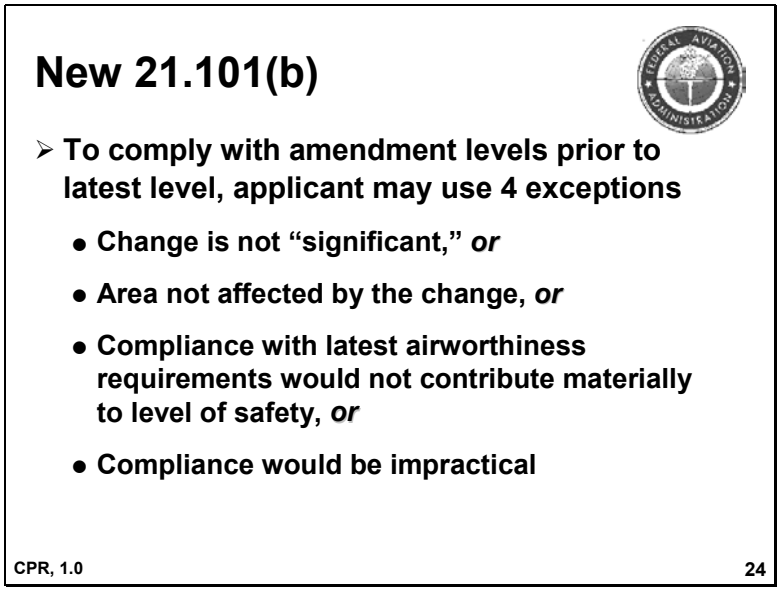
D. Review of 21.101



- 21.101 establishes the certification basis, it does not excuse the applicant from demonstrating compliance. The applicant must always demonstrate compliance if they make a change. It's just a question of to which rule compliance is being demonstrated.



- **21.101(a)** requires a change to a type certificated product to comply with the latest **airworthiness** requirements in effect on the date of application unless the change meets the criteria for one of the exceptions identified in 21.101(b) and (c).
  - This rule change does not affect the requirements defined in parts 34 and 36. Procedures used to establish the **environmental** requirements for changed products are established in the environmental regulations



- The amendment level chosen cannot predate either the existing certification basis or anything required by the retroactive sections, 23.2, 25.2, 27.2, or 29.2.
  - We'll discuss implementation details about each of these exceptions **LATER** in this presentation**.** Right now we're just providing an **OVERVIEW.**

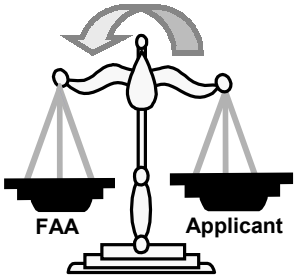
New 21.101(c) — Excepted Products

- CPR does apply to these products
- Excepted products are:
  - Aircraft, other than rotorcraft, ≤ 6,000 lb
  - Non-turbine rotorcraft ≤ 3,000 lb
- Applicant may show compliance with existing certification basis unless Administrator finds change is significant in an area

CPR, 1.0 25

- **21.101 does apply** to these aircraft.
  - The exception applies at the aircraft level only. Design changes to engines and propellers installed on these excepted aircraft are assessed as separate products using paragraphs 21.101(a) and (b).

FAA has Burden to Identify *Significant* Changes to Excepted Products



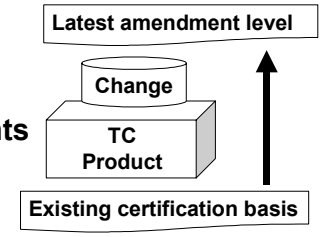
If Administrator finds change is significant in an area, Administrator may designate compliance with a later amendment to the regulations

AC 21.101-1

CPR, 1.0 26

FAA Identifies Applicable Regulations Bottom-Up Approach

- **Used for significant changes to excepted products**
- **Begin with regulations referenced in TC**
- **Review later amendments**
- **Identify appropriate amendment level**



CPR, 1.0 27

Significant Changes to Excepted Products

- **Applicant may elect to apply exceptions**
  - **Area not affected by the change, or**
  - **Compliance with later requirements would not contribute materially to level of safety, or**
  - **Compliance would be impractical**
- **Burden on applicant to demonstrate**

CPR, 1.0 28

New 21.101(d) — Special Conditions

- Used for novel or unusual design features for which no appropriate standards exist
- Apply to both significant and not significant changes
- Issued with level of safety equivalent to latest regulations when change significant
- Should be consistent with agreed-upon certification basis for changed product

CPR, 1.0 29

New 21.101(e) — Effectivity Period of Application

Transport Category Aircraft - 5 years

Other aeronautical products - 3 years

Effective period applies to issuance of, or amendment to, both TCs and STCs, based on date of formal application

CPR, 1.0 30

New 21.101(e), cont.

- If change not certified within time limit, applicant may:
  - File for a new application, *or*
  - File for an extension of original application
- Process for obtaining extensions is one used today for type certificates

CPR, 1.0 31

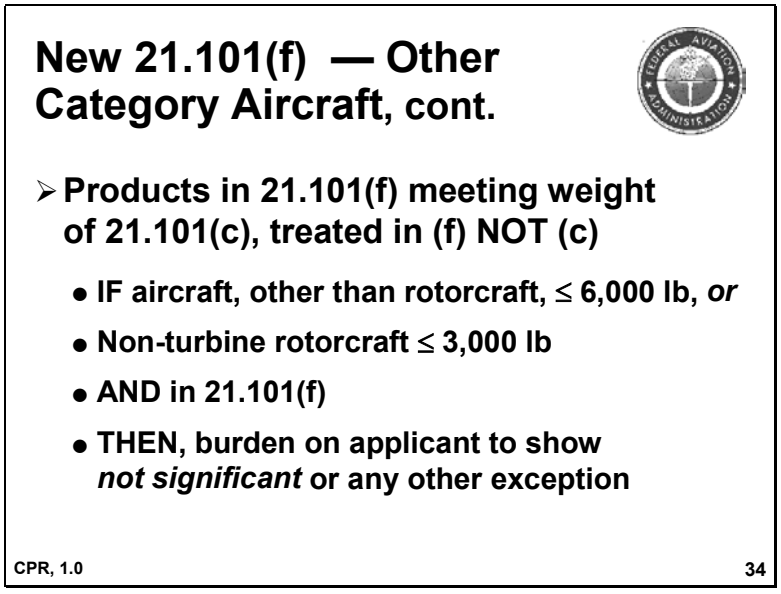
New 21.101(f) — Other Category Aircraft

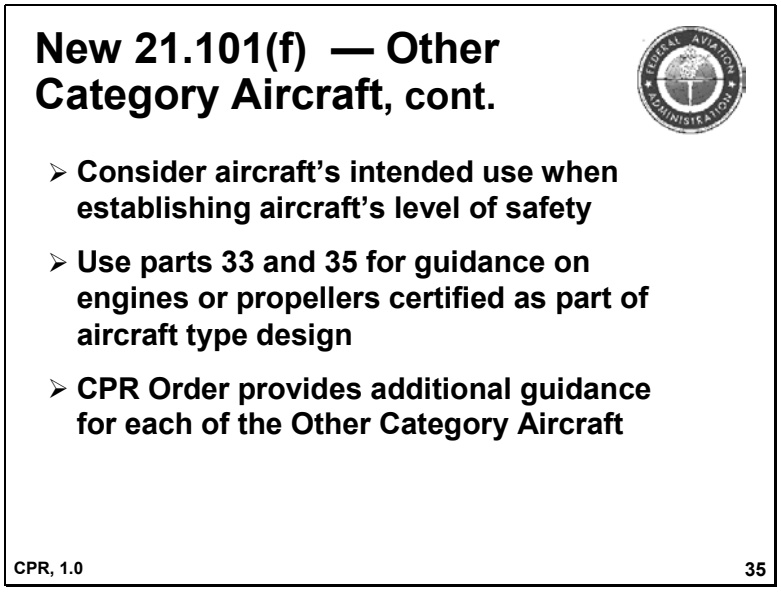
- Applies to aircraft certificated under:
  - Special Class - 21.17
  - Primary Category - 21.24
  - Restricted Category - 21.25
  - Surplus Military - 21.27
  - Limited Category - CAR 9

CPR, 1.0 32

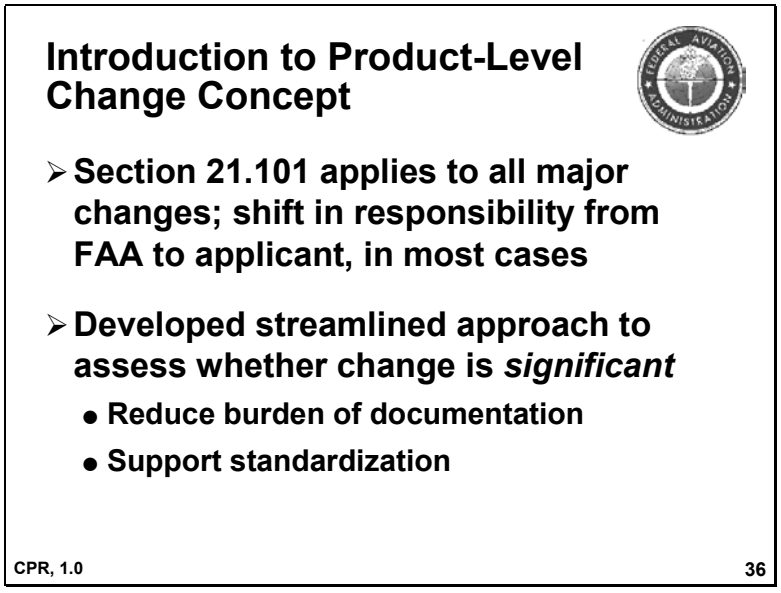
- There is more information on this paragraph at the end of the *Significant* section. Right now we're just giving you the highlights of this paragraph.

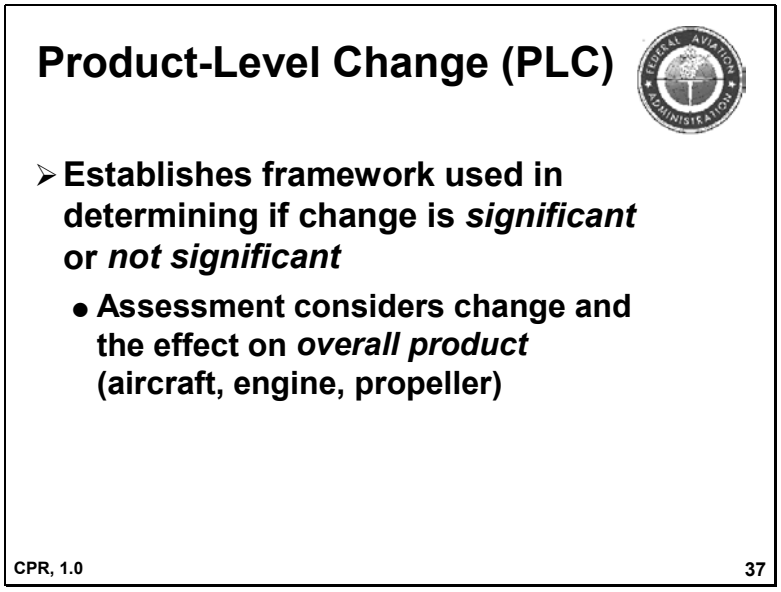
- For *significant* changes, the certification basis will include airworthiness requirements that the Administrator finds to be appropriate for the type certification of the aircraft consistent with the referenced FAR section.

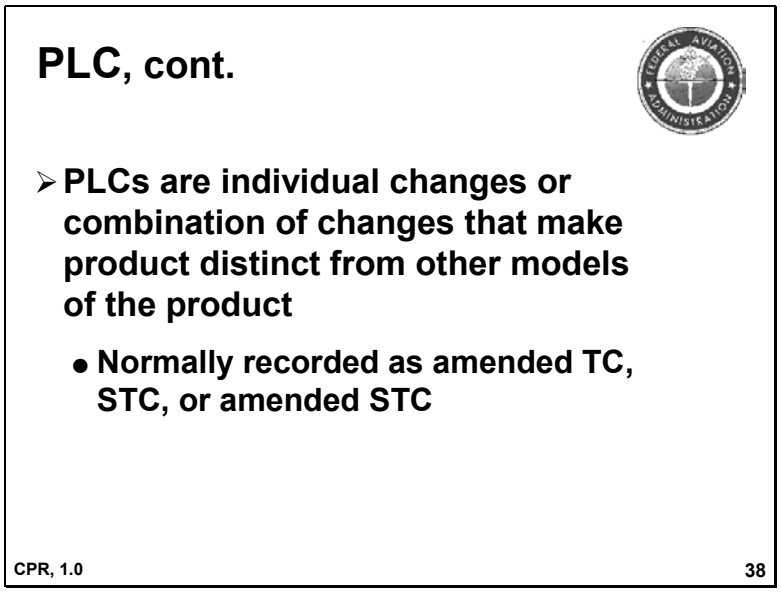




E. Introduction of Product-Level Change Concept

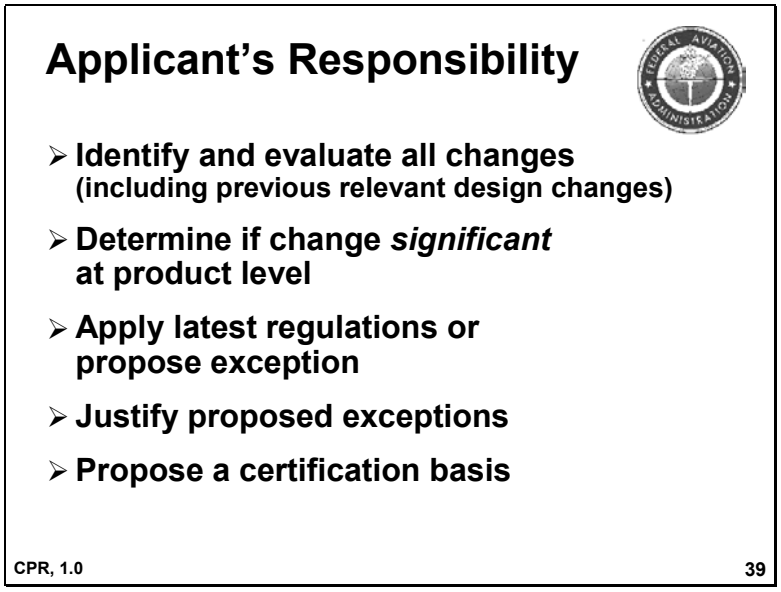




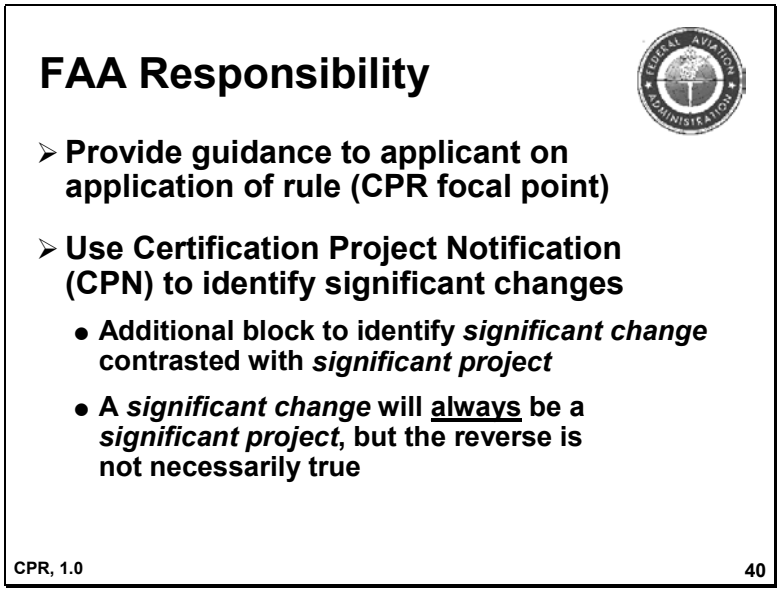


- ***Product-level changes*** distinctions include changes to a product's range, payload, or speed.
- A model change is not a prerequisite for a product-level change.

F. Roles and Responsibilities



- The exceptions are: *not significant*, *not affected area*, *does not contribute materially to the level of safety*, and *impractical*.



- AIR-100 also has a focal point for CPR.

FAA Responsibility, cont.

- **Use delegation system to streamline implementation**
  - **ACOs need to work with applicants to establish effective delegation system**
- **For excepted products, determine if change is *significant***
  - **Burden on FAA, as default *not significant***
  - **Applicant applies any other exceptions**

CPR, 1.0 41

FAA Responsibility, cont.

- **Use Appendix 1 of CPR AC for pre-determinations of *not significant***
- **For *significant* changes, approve/ disapprove exceptions as proposed by applicant**
  - **Review data submitted; make a finding**
- **Determine certification basis**

CPR, 1.0 42

FAA Responsibility, cont.

- Directorate makes final determination of certification basis
- Issue paper process one way to document, resolve issues between applicant and FAA
- Standards Staff and CIT also resources
- Agreements such as the Partnership for Safety Plan (PSP) and Project-Specific Certification Plan (PSCP) useful

CPR, 1.0 43

FAA Responsibility, cont.

- Use the G-1 issue paper to resolve issues
  - Document *significant* changes
  - Identify *not significant* changes where existing certification basis is inadequate
  - Document application of special conditions per 21.101(d)

CPR, 1.0 44

FAA Responsibility, cont.

- FAA responsibility to develop issue paper
- When disagreement between applicant and Directorate regarding exceptions allowed by 21.101(b), AIR-100 part of coordination process and makes final decision for applying exceptions

CPR, 1.0 45

FAA Responsibility, cont.

- Upon completion of project, document certification basis in amended type certificate data sheet (TCDS) or on STC (per CPR Order)
  - Now more important because of requirement to assess all previous relevant design changes against most recent update of certification basis

CPR, 1.0 46

Applicants Without a Delegation System

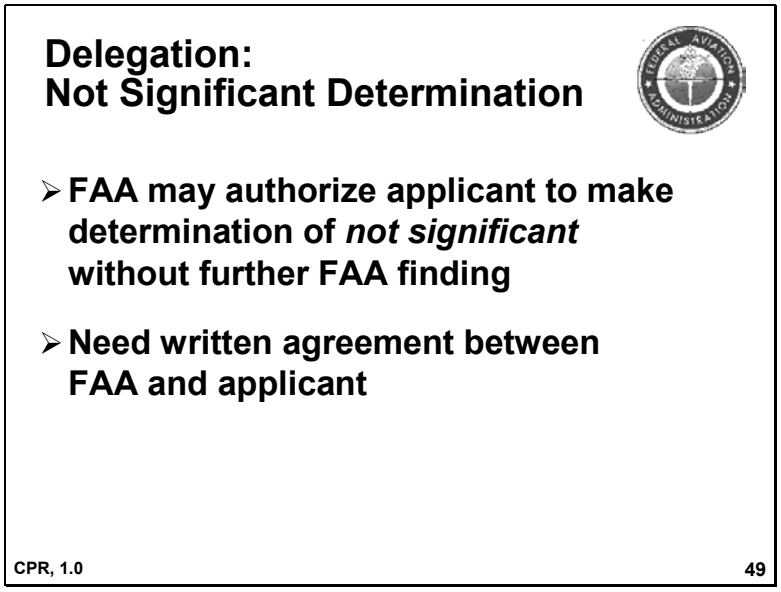
- Applicant may classify change as *not significant* using criteria in 21.101(b) and Appendix 1 of AC
- FAA may make determination based on applicant's proposed classification

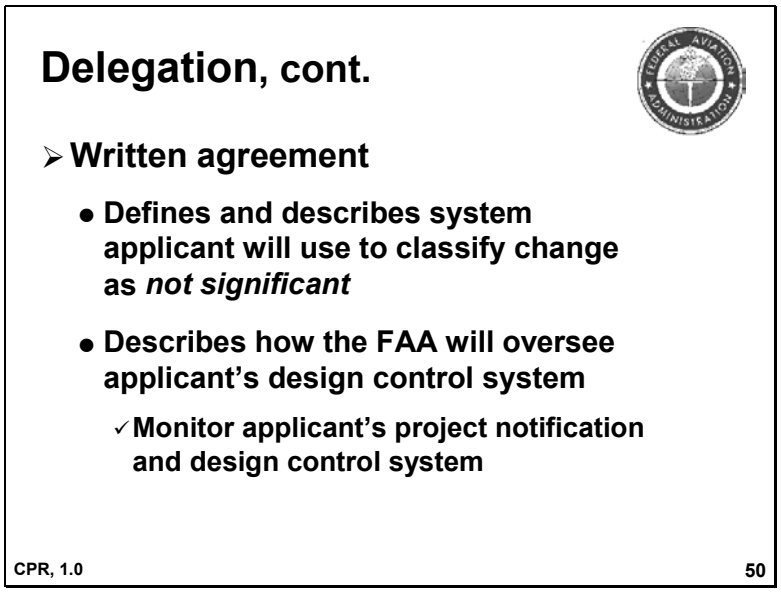
CPR, 1.0 47

Applicants Without a Delegation System, cont.

- If FAA disagrees with the applicant's classification for *significant*
  - Use the issue paper process to resolve differences
  - Coordinate decisions with AIR-100 to ensure consistent, standard application of the rule

CPR, 1.0 48





- The ACO establishes the level of responsibility with regard to delegation and oversight.

Delegation, cont.

- **Acceptable system *must* :**
  - **Include procedures to classify change as *not significant*, and**
  - **Cover changes not adequately addressed in existing certification basis**

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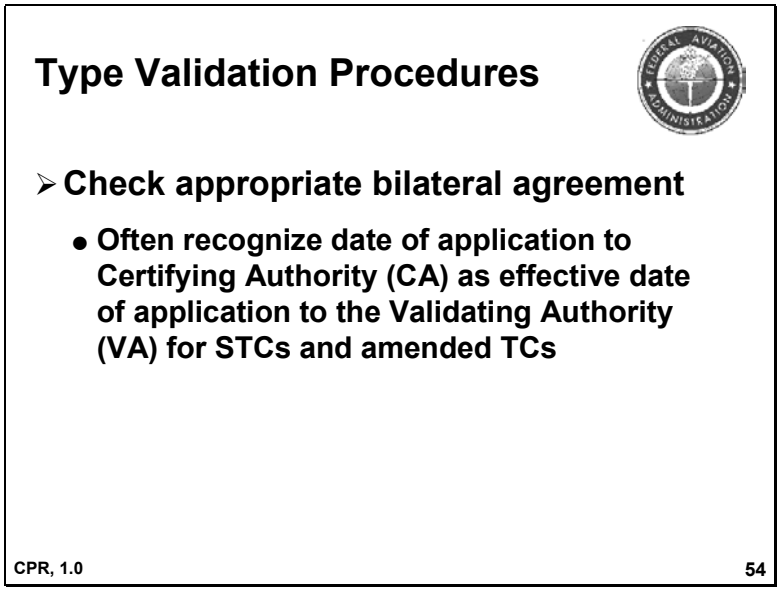
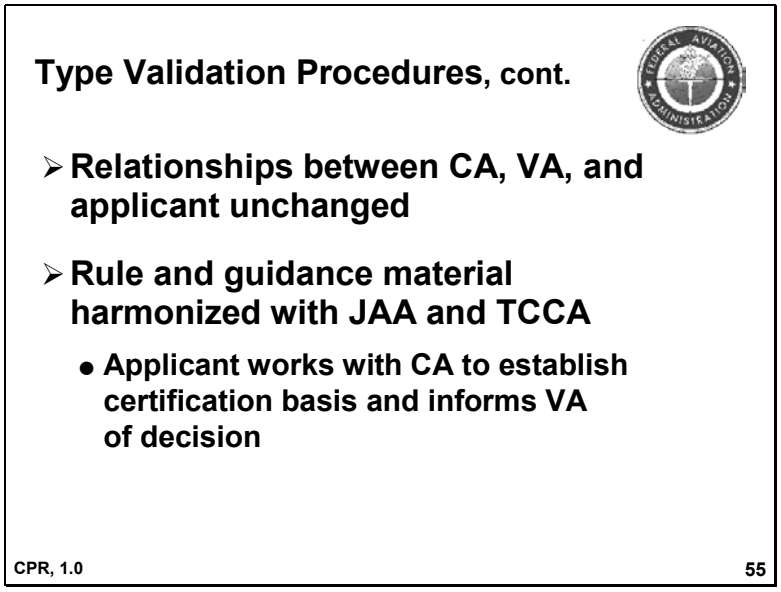
Delegation, cont.

- **Written agreement may take several forms:**
  - **Stand-alone document,**
  - **Part of PSP or PSCP,**
  - **Organization Procedures Manual,**
  - **Applicant's quality manual,**
  - **Existing memorandum of agreement (MOA)**

CPR, 1.0 52

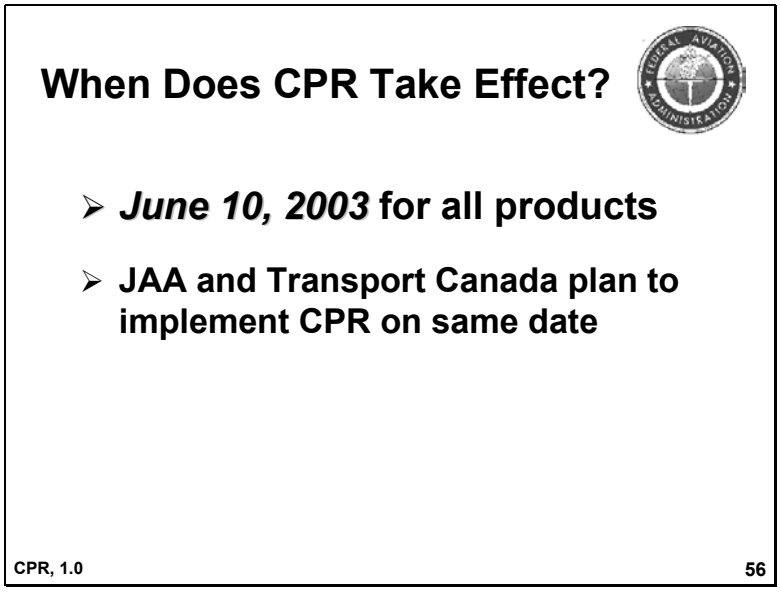
G. Type Validation Procedures





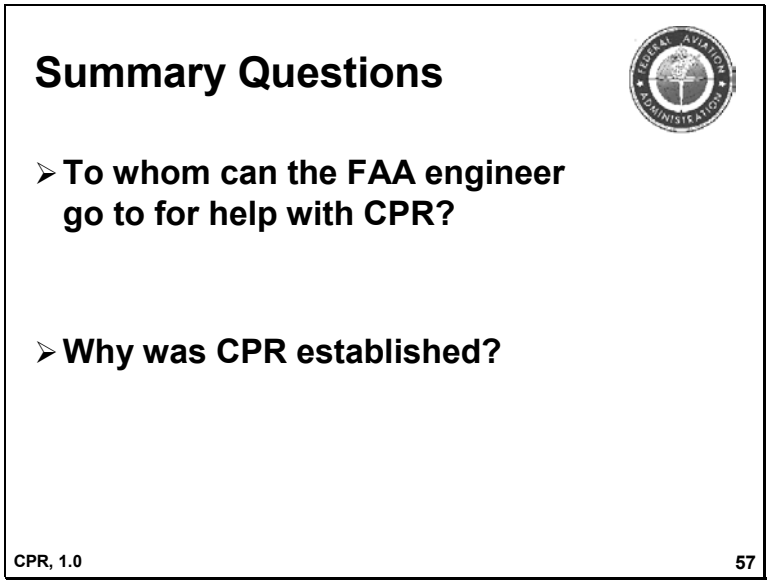
- The Continuous Improvement Team will include JAA and TCCA membership to ensure continuous coordination and communication as we gain experience in implementing 21.101.

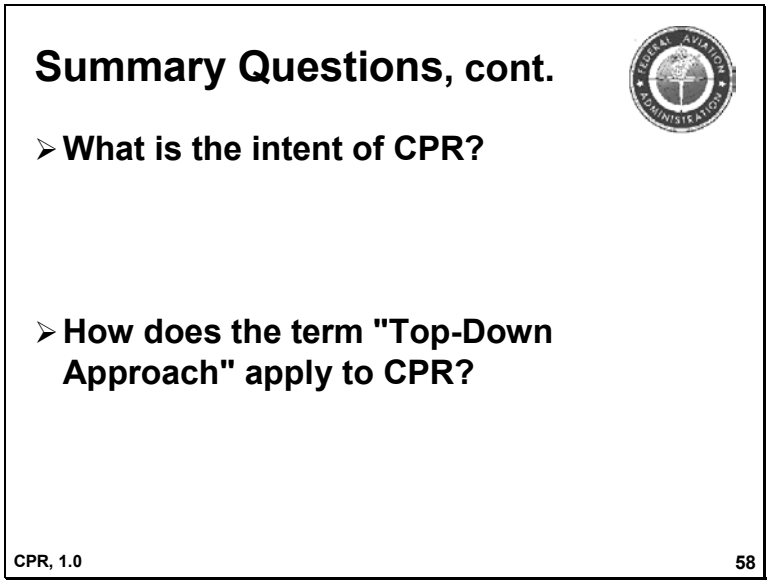
H. When Does CPR Take Effect?



I. Summary

- **Now I'm going to ask you some questions about this section**. This will help us and you find out if there are areas of confusion.





Summary Questions, cont.

- What products do not use the top-down approach for CPR?
- For the excepted products, who has the responsibility to find the change *significant*?

CPR, 1.0 59

Summary Questions, cont.

- For excepted products, if the change is *significant*, who is responsible for applying the three remaining exceptions?

CPR, 1.0 60

Section II Summary

- **Intent of CPR**
  - **Enhance safety by applying the latest airworthiness standards for certification of *significant* design changes to the greatest extent practical**
- **CPR changes process used to establish certification basis in most cases**
  - **Starting point for *significant* changes is latest regulations**

CPR, 1.0 61

Section II Summary

- **For most products, applicants have burden of proposing use of an exception to provide relief from applying latest regulations to a major change**
- **For excepted products, the FAA must determine that a change is *significant***
  - **Default is *not significant***
  - **Starting point is regulations referenced in TC**

CPR, 1.0 62

Section II Summary, cont.

- **Use product-level change concept and delegation system to streamline implementation and mitigate burden for determining if change is *not significant***
- **FAA must use PLC and develop tailored delegation approaches with manufacturers to achieve optimal safety benefit**
- **Designated focal points and CIT will foster standardization and identify barriers**

CPR, 1.0 63